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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,038	06/15/2001	Aleksandra Smiljanic	03493.00219	5166
26652	7590	07/26/2005	EXAMINER	
AT&T CORP. P.O. BOX 4110 MIDDLETOWN, NJ 07748			KADING, JOSHUA A	
			ART UNIT	PAPER NUMBER
			2661	

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/881,038

Applicant(s)

SMILJANIC, ALEKSANDRA

Examiner

Joshua Kading

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 22 and 23 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2 is/are allowed.
- 6) ☒ Claim(s) 1,3-14 and 17-21 is/are rejected.
- 7) ☒ Claim(s) 1,2,4,6,7,10 and 15-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date. 072005.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-21, drawn to scheduling of packets for transmission according to a given priority, classified in class 370, subclass 395.41.
 - II. Claims 22 and 23, drawn to determining of communication parameters, specifically transmission/reception capacity, classified in class 370, subclass 252.

The inventions are distinct, each from the other because of the following reasons:
drawn to different subject matter classified in different sub-classes as note above.

Group I is directed to subject matter dealing with the priority transmission scheduling of packets in a queue based system. Group II is directed to subject matter that focuses on determining characteristics (i.e. transmission/reception capacities) of the network and transmitting packets after these characteristics are determined.

2. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

3. During a telephone conversation with Mr. Henry T. Brendzel on 18 July 2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-21. Affirmation of this election must be made by applicant in replying to this Office action. Claims 22 and 23 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Objections

1. Claims 15 and 16 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from another multiple dependent claim. See MPEP § 608.01(n). Accordingly, claims 15 and 16 have not been further treated on the merits.

2. Claims 1, 2, 4, 6, 7, 10, and 15-19 are objected to because of the following informalities:

Claim 1, line 9, "available said outputs" should be changed to --said outputs that are available--.

Claim 2:

Line 4, each instance of "(data)" should be changed to --data--.

Line 5, "each frame" should be changed to --each data frame--.

Line 6, "of time slots" should be changed to --of data time slots--.

Line 7, "the difference" and "the current" should be changed to --a difference-- and --a current-- respectively.

Line 8, "the total" should be changed to --a total--.

Lines 8-9, "previous reservation frames" should be changed to --previous reservation frame--.

Lines 10 and 12, each instance of "their" should be changed to --said inputs'--.

Lines 14 and 15, "said input" should be changed to --one of said inputs--.

Line 15, "releases reserves" should be changed to --reserves--.

Line 21, "table update of outputs by said inputs" should be changed to --
said updating of input tables--.

Claim 4, line 2, "from group" should be changed to --from a group--.

Claim 6, line 5, "(data)" should be changed to --data--.

Claim 7, lines 1-2, "wherein input table" should be changed to --wherein an input
table--.

Claim 10, lines 1-2, "where input" should be changed to --where an input--.

Claim 15:

Line 3, "is the one in" should be changed to --is one in--.

Line 4, each instance of "packet" should be changed to --packets--.

Claim 16:

Line 2, "the previously proposed" should be deleted.

Line 3, "which is maximal matching algorithm defined in claim 15" should
be deleted to avoid confusion.

Claim 17:

Lines 1-2, "wherein applied to the bandwidth allocation in wide area
network" should be deleted because it does not make sense in the claim.

Line 2, "switches in wide area network" should be changed to
--switches in a wide area network--.

Line 3, "its" should be deleted because it creates confusion.

Claim 18:

Line 3, "even" should be deleted.

Line 5, "and minimum" should be changed to --and a minimum--.

Claim 19:

Line 4, "said method comprising the steps of" should be changed to --said apparatus comprising--.

Line 4, "input-output and" should be changed to --input-output queues and--.

Lines 5 and 7, "time division" and "loading" at the beginning of each line should be deleted because they are not needed in a means plus function limitation.

Line 9, "available" should be deleted and "outputs to" should be changed to --outputs that are available to--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3-15, 17, 18, 20, and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3-6, 8-14, 17, 20, and 21 disclose numerous variables, such as "x", "N", "F", "n", "k", "m", "a_{im}", "a_{mj}", etc. where these variables lack antecedent basis.

Claim 7, line 2 and claim 14, lines 2-3 recite, "it" and "its". It is unclear what "it" or "its" is referring to.

Claim 14 recites the limitation "the number of credits" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 15 recites the limitation "either input" in line 3. There is insufficient antecedent basis for "either input" in the claim. There is no previous disclosure of two inputs to choose from.

Claims 15 and 16 recite the limitation "steps 3 and 4" in lines 1-2. There is insufficient antecedent basis for limitation in the claim. There are no explicit steps 3 and 4.

Claim 17 recites the limitation "the source to the destination" in line 9. There is insufficient antecedent basis for limitation in the claim.

Claims 15 and 16 recite, "the method of claims 12 or 13...the claim 1 method..." It is unclear which method applicant intends claim 15 to depend from, is it claim 12, 13,

or 1? As noted above, since claims 12 and 13 are multiple dependent claims, claim 15 cannot also be a multiple dependent claim. Please note that even if claim 15 depended from either 12 or 13 there would still be confusion because of "the claim 1 method" recited in the claim.

Claim 18 recites, "the method of claim 1...the methods of claims 12 and 13..." As with claims 15 and 16, it is not clear which method claim 18 depends from.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,602,829, Nie et al. (Nie) in view of U.S. Patent 6,618,379 B1, Ramamurthy et al. (Ramamurthy).

Regarding claim 19, Nie discloses, "an apparatus for allocating bandwidth for use at a packet switch having a plurality of inputs for switching to specified outputs and a plurality of corresponding input buffers having input-output queues, said buffers being coupled to said input-output and having associated counters, said apparatus comprising:

means for loading said counters associated with said input-output queues to said negotiated integer value once per said frame (*col. 3, lines 46-56 where the transmission capable counter keeps track of the amount of data being transmitted and must then be loaded with a negotiated value because the counter counts down to 0*);

wherein said inputs sequentially selecting said outputs that are available to which said inputs send packets...(*col. 4, lines 3-10*),

However, Nie lacks what Ramamurthy discloses, "means for dividing time into a plurality of frames of time slots, each frame having a negotiated integer value of time slots (*col. 5, lines 59-65*);

wherein priority is given to input-output queues with counters having positive values (*col. 5, lines 59-65*);

and wherein selection of outputs by said inputs is done using a pipeline technique, and wherein not all inputs select outputs for a specified time slot in the future while other inputs choose outputs for some other future time slots (*col. 5, lines 59-65*)."

It would have been obvious to one of ordinary skill in the art at the time of invention to include the time slots and pipelining technique motivated by the desire to provide fast scheduling while maintaining good performance and abiding by stringent timing requirements (*Ramamurthy, col. 2, lines 31-37*).

Regarding claim 1, Nie and Ramamurthy disclose similar features as claim 19 and thus the equivalent limitations of claim 1 to those of claim 19 are rejected for the same reasons as in claim 19. In addition, Nie further discloses, "decrementing said counters

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of selected queues by 1 (*col. 3, lines 46-56 where although Nie discloses decrementing by the amount of data transmitted, this is equivalent to decrementing the counter by 1 because the amount of data transmitted is 1 unit of data, applicant's invention and the invention of Nie are merely counting using different units*).” It would have been obvious to one of ordinary skill in the art at the time of invention to include the time slots and pipelining technique motivated by the desire to provide fast scheduling while maintaining good performance and abiding by stringent timing requirements (*Ramamurthy, col. 2, lines 31-37*).

Allowable Subject Matter

5. The following is a statement of reasons for the indication of allowable subject matter: Claim 2 is allowable (if the above objections are overcome) because the prior art fails to teach, in combination with all other claim limitations, updating the input tables after releasing and reserving outputs for future time slots, storing the outputs of each time slot of a frame, and reserving the outputs corresponding to the input in each time slot of a frame.

6. Claims 3-14, 17, 18, 20, and 21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

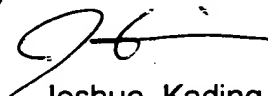
Conclusion

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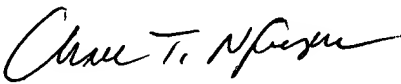
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Kading whose telephone number is (571) 272-3070. The examiner can normally be reached on M-F: 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Joshua Kading
Examiner
Art Unit 2661

July 18, 2005


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